Application No.: 10/511,194 Response to Office Action

Attorney Docket: SOMMR-014US

Amendments to the Claims:

1. (Cancelled)

2. (Cancelled)

3. (Currently Amended) A device as claimed in Claim 1, wherein, An electronic pointing or cursor control device comprising a first chamber and a second chamber, wherein:

the first chamber is fluid tight;

the two chambers are adjoined and separated by a fluid-tight separating wall;

the first chamber contains electronic components;

the second chamber comprises an aperture;

the second chamber contains a ball, the ball protruding through said aperture;

the electronic components include an optically permeable region; and the optically permeable region and the ball, the optical detector being operable in use to detect motion of the ball and to generate electronic signals representative of said motion, wherein the distance in the second chamber between the surface of said optically permeable region and the surface of the ball is sufficiently small such that any liquid between the ball and the optically permeable region of the separating wall is thinly dispersed and does not prevent optical transmission between the ball and the optical detector.

4. (Previously Presented) A device as claimed in Claim 3, wherein the distance in the second chamber between the surface of said optically permeable region and the surface of the ball is less than 1.5 mm.

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5. (Currently Amended) A device as claimed in Claim[[1]] 3, wherein the optical detector comprises an optical lens, the focal depth of said lens being such as to ensure that, irrespective of the nature of any liquid between the ball and the optically permeable region of the separating wall, the optical detector is sufficiently focused to enable the device to operate.

6. (Currently Amended) A device as claimed in Claim [[1]] 3, wherein the separating wall is made of a translucent plastics material.

7. (Original) A device as claimed in Claim 6, wherein the optically permeable region of the separating wall comprises a polished region of the said plastics material.

8. (Currently Amended) A device as claimed in Claim [[1]] 3, wherein the second chamber further comprises a drainage outlet.

9. (Currently Amended) A device as claimed in Claim 8, wherein An electronic pointing or cursor control device comprising a first chamber and a second chamber, wherein:

the two chambers are adjoined and separated by a fluid-tight separating wall;

the first chamber contains electronic components;

the second chamber comprises an aperture;

the second chamber contains a ball, the ball protruding through said aperture;

the said separating wall comprises an optically permeable region;

the electronic components include an optical detector directed towards the optically permeable region and the ball, the optical detector being operable in use to detect motion of the ball and to generate electronic signals representative of said motion;

the second chamber further comprises a drainage outlet; and

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the second chamber further comprises a cleaning fluid inlet.

10. (Currently Amended) A device as claimed in Claim [[1]] 3, wherein the

second chamber contains cleaning liquid.

11. (Currently Amended) A device as claimed in Claim [[1]] 3, wherein the

optical detector is mounted in a position substantially on a diametric line through the ball

normal to the mounting plane of the device.

12. (Currently Amended) A device as claimed in Claim [[1]] 3, wherein the

optical detector is mounted at an angular position around the circumference of the ball such

that a radial line from the ball to the optical detector forms a non-zero angle with a diametric

line through the ball normal to the mounting plane of the device.

13. (Currently Amended) A device as claimed in Claim 12, wherein the optical

detector is mounted at an angular position around the circumference of the ball such that a

radial line from the ball to he optical detector forms a non-zero angle of between 0° and 20°

with a diametric line through the ball normal to the mounting plane of the device.

14. (Currently Amended) A device as claimed in Claim 12, wherein the optical

detector is mounted at an angular position around the circumference of the ball such that a

radial line from the ball to the optical detector forms a non-zero angle of between 20° and

50° with a diametric line through the ball normal to the mounting plane of the device.

15. (Previously Presented) A device as claimed in Claim 14, further

comprising a processor configured to apply vector transformations to the signals generated

by the optical detector in order to compensate for the angular position at which the optical

detector is mounted.

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16. (Currently Amended) A device as claimed in Claim 12, wherein the optical detector is mounted at an angular position around the circumference of the ball such that a radial line from the ball to the optical detector forms an angle of substantially 90° with a diametric line through the ball normal to the mounting plane of the device.

17. (Previously Presented) A device as claimed in Claim 16, wherein the optical detector is one of two such optical detectors mounted in mutually orthogonal positions with respect to said diametric line.

18. (Currently Amended) A device as claimed in Claim [[1]] 3 being a trackball.

19. (Currently Amended) A device as claimed in Claim [[1]] 3 being a mouse.

20-38. Cancelled